

REMARKS

Reconsideration of this application, as amended, is respectfully requested. Claims 5-9 and 23-34 are currently pending in this application. Claims 25-28 have been cancelled without prejudice or disclaimer. Claims 6 and 31 have been amended and new claims 35-41 have been added. Support for these amendments and new claims is found in the application as originally filed at, for instance, page 9, lines 3-6. Consideration and entry of this amendment is respectfully requested.

REJECTIONS UNDER 35 USC § 112, FIRST PARAGRAPH

A. Claims 6 and 30-31

Claims 6 and 30-31 stand rejected under 35 U.S.C. § 112, first paragraph. The Examiner alleges that the claims do not enable the conservative substitutions referred to in claims 30 and 31. Applicants respectfully disagree as set forth below.

Applicants believe the claims are enabled as to conservative substitutions. The specification is very clear as to the definition of a conservative substitution and the incorporation of such substitutions into the claimed sequences would not require an undue amount of experimentation or work. For instance, at page 7 lines 3-17, the specification teaches several types of amino acids that may be substituted for one another including non-polar / hydrophobic amino residues, polar / hydrophilic residues, basic residues, acidic residues, and chemically derivatized residues thereof. Given the teachings of the instant specification, Applicants respectfully submit that one of skill in the art could modify the claimed nucleic acid sequences to encode the conservatively substituted peptides referred to in the claims without undue experimentation. This type of work is simple and routine in the art, as recently stated by the Federal Circuit ("... a routine matter to convert back and forth between an amino acid sequence and the sequences of the nucleic acid molecules that can encode it." *In re Wallach*, 378 F.3d 1330, 71 U.S.P.Q.2d (BNA) 1939 (Fed. Cir. Aug. 11, 2004)). As such, Applicants do not believe this rejection is proper and respectfully request its withdrawal.

B. Claims 6, 8-9, 24-25, 27-28, 30-31 and 33

Claims 6, 8-9, 24-25, 27-28, 30-31 and 33 stand rejected under 35 U.S.C. § 112, first paragraph with respect to sequences that are complementary to or hybridize to SEQ ID NO.: 12-17. Claim 6 has been amended to delete reference to both complementary and hybridizing sequences, as well as reference to SEQ ID NO.: 13. These characteristics are now claimed in new independent claims 35, 36, 40 and 41. Claims 24-28 have been cancelled. The rejection as to claims 6 and 24-28 is therefore moot.

Applicants maintain that new claims 35, 36, 40 and 41, claiming complementary sequences and those that hybridize to particular sequences, satisfy the enablement requirement under 35 U.S.C. § 112, first paragraph. As recently stated by the Federal Circuit:

A claim to the genus of DNA molecules complementary to the RNA having the sequences encompassed by that formula, even if defined only in terms of the protein sequence that the DNA molecules encode, while containing a large number of species, is definite in scope and provides the public notice required of patent applicants. *In re Wallach*, supra.

Similarly, claims 35, 36, 40 and 41 may include a large number of sequences, but one of skill in the art would not be subjected to undue experimentation in either identifying or preparing the same. Thus, Applicants do not believe this enablement rejection is applicable to these new claims.

C. Claims 24 and 25

Claims 24 and 25 stand rejected under 35 U.S.C. § 112, first paragraph. These claims have been cancelled. The rejection is therefore moot.

REJECTIONS UNDER 35 U.S.C. 102(b)

Claims 6, 8-9, 24-25, 27-28, 30-31 and 33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Harrison et al. (U.S. Pat. No. 5,827,812; "Harrison"). Applicants respectfully disagree, as indicated below.

Claims 6 and 31 have been amended to delete reference to SEQ ID NO.: 13. Claims 24-28 have been cancelled. The rejection as to claims 6, 24-28, 31, and 33 is therefore moot.

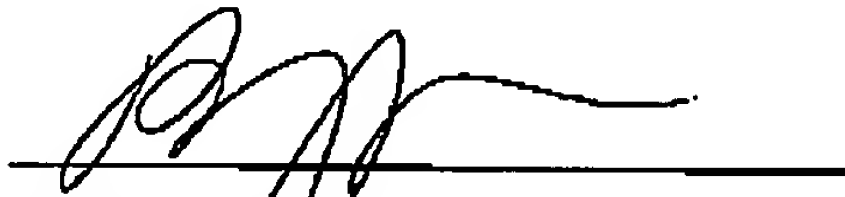
New claims 37-41 have been added and, with respect to SEQ ID NO.: 13, relate to nucleic acids that are at least 85% identical thereto. These new claims are supported by the specification as originally filed at, for instance, page 9, lines 3-6. SEQ ID NO.: 17 of Harrison shares less than the claimed "at least 85% identity" with instant SEQ ID NO.: 13. Accordingly, this rejection is inapplicable against these new claims..

CONCLUSIONS

Applicants respectfully maintain that the pending claims are now in condition for allowance. It is requested that a Notice of Allowance for these claims be issued as soon as possible. The Examiner is encouraged to contact the undersigned with any questions and/or comments.

Respectfully submitted,

Date: December 1, 2005



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